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The Kindergarten.

MISS S. E. BLOW.

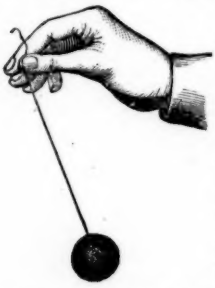
[An Address before the Normal Teachers' Association, St. Louis, Mo., April, 1875.]

IT is a truth now universally recognized by educators that ideas are formed in the mind of a child by abstraction and generalization from the facts revealed to him through the senses; that only what he himself has perceived of the visible and tangible properties of things can serve as the basis of thought, and that upon the vividness and completeness of the impressions made upon him by external objects will depend the clearness of his inferences and the correctness of his judgments. It is equally true, and as generally recognized, that in young children the perceptive faculties are relatively stronger than at any later period, and that while the understanding and reason still sleep, the sensitive mind is receiving those sharp impressions of external things which, held fast by memory, transformed by the imagination, and finally classified and organized through reflection, result in the determination of thought and the formation of character.

These two parallel truths indicate clearly that the first duty of the educator is to aid the perceptive faculties in their work by supplying the external objects best calculated to serve as the basis of normal conceptions by exhibiting these objects from many different stand-points, that variety of interest may sharpen and intensify the impressions they make

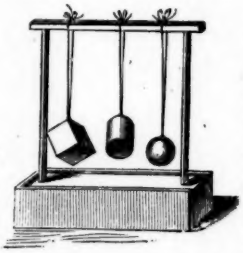
upon the mind, and by presenting them in such a sequence that the transition from one object to another may be made as easy as possible.

The advocates of the Kindergarten believe that Froebel has met this fundamental necessity in education better than any other thinker, and that the series of objects technically called Froebel's Gifts offer the healthiest nourishment yet discovered for the child's mind, and constitute the best basis yet known for strong and harmonious development of the intellectual powers. It is my purpose to-day to describe these gifts briefly, in the order of their succession, to indicate their connection, and to try to make clear the law by which their sequence is determined. Recognizing clearly the necessity of a definite starting point for thought, Froebel presents to the child in his first gift the ball, an object containing, under the simplest form, the properties common to all things. By means of the ball we illustrate the general properties of size, color, form, weight, and density, while at the same time we give the child the easiest thing in the world to grasp with the hand and the mind. It is the simplest of forms, for it has not sides, corners, or edges. It is easy to conceive as a whole, for in all positions it appears the same. It is the fundamental form throughout nature, and is constantly appearing in both the organic and inorganic creations; and, finally, it is perfectly harmonious, being, one may almost say, the ideal form towards which the universe strives. To the child, moreover, the ball is the source of infinitely varied amusement. He rolls it; he tosses it; he whirls it round and round. Holding it by a string, he moves it up and down, right and left, round in an ever-widening or an ever-narrowing circle. It becomes to him the representative of a thousand things. Through its form it stands for the flowers and fruits he has learned to love; through the motions he gives it, it becomes to him the springing cat, the flying bird, the climb-

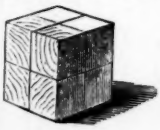


ing squirrel — all the objects with which his little experience of life has made him familiar, are embodied in it; and just from its great simplicity result its manifold adaptations.

As introduced into the Kindergarten, the first gift consists of a box containing six soft worsted balls of the different primary and secondary colors. These balls should be so used that the child will learn through actual experience all their essential characteristics, both in rest and in motion, in their relation to each other and in their relation to himself.

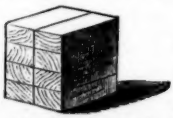


The second gift, which consists of a hard ball, a cube, and a cylinder, involves at its basis recognition of the truth that in order to clear knowledge there must be comparison; or, in other words, that we only learn what a thing is by learning what it is not. Therefore, to complete the child's knowledge of the ball, he must compare it with something else, and as his powers are too weak to discern slight divergences, he needs an object which presents to it the completest possible contrast. This we find in the cube. Instead of the unity of the ball, we have in the cube variety; instead of the simplicity of the ball, we have in the cube complexity; instead of the unvarying uniformity of the ball, we have in the cube an object which changes with every modification of position and every acceleration of movement; instead of the ready movableness of the ball, we have in the cube an object which, as it were, embodies the tendency to repose. The cylinder forms the connecting link between the ball and the cube. Like the ball, it is round and without corners; and like the cube, it has sides and edges. It contains the ball and is contained by the cube, and it unites the movableness of the one with the fixedness of the other.



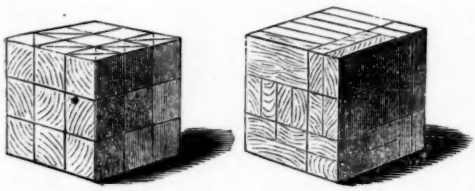
In the third gift, which consists of a cube divided once in every direction, giving eight smaller cubes, we pass from contrasts of form to contrasts of size. This gift, considered as a

whole, is identical with the cube of the second gift; but through its divisions it enables the child to grasp inner conditions as well as external appearance, leads from the conception of a simple unit to the elements of which such unit is composed, thus paving the way for rational analysis. And as every analysis should end in a synthesis, every division of the cube into its parts is followed either by their recombination into the original whole or by the production of a new whole, of which each small cube is again an essential part. Thus the third gift meets the instinctive craving of the child to find out what is inside of things, and at the same time, through the number and variety of its possible transformations, it satisfies and stimulates the creative powers. The gift is also excellently adapted to give children definite ideas of number, and only those who have seen the little calculators making all possible combinations of their eight cubes, can understand how the experiences thus obtained will simplify arithmetic, and make it a pleasure instead of a torture, alike to teacher and pupil.



The fourth gift, like the third, is a divided cube, but in its subdivision we have blocks whose sides are oblongs instead of squares. And whereas, in the small cubes of the third gift the length, breadth, and thickness were equal, the parallelopipeds of the fourth gift are twice as long as they are broad, and twice as broad as they are thick. Thus the three dimensions of space implied in the third gift are emphasized in the fourth, and all the possibilities latent in the former are actualized in the latter.

As all development moves from the simple to the complex, and as in the child what is new unfolds from the old, so in the Kindergarten gifts which are intended to be an objective counterpart of this subjective process, we find each new gift contains all that existed in the previous gifts, with the addition of elements which they implied, but did not realize. Thus in the fifth gift we again have the cube. This time, however, the cube is larger: the number of its parts is greatly increased, and by dividing some of the smaller cubes, the tri-

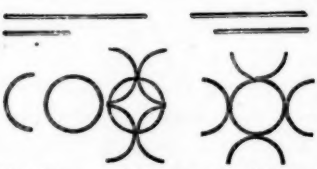


angular form is introduced. Thus a greatly increased amount of material is put into the hands of the child, and alike in extended numerical relations, in variety of fundamental forms, and in adaptability to creative purposes, this gift is an advance upon its predecessors. With the sixth gift, which is a cube of the same size as the fifth, but differs in its subdivisions, we complete the series of solid forms.

To understand these gifts we must clearly and definitely apprehend their relation to each other, for it is this relation that gives them their significance, and upon the recognition of this relation depends the power with which they are used. We conceive nothing truly so long as we conceive it alone. It is only when the relations of any individual object to universal law are rightly apprehended, that a clear insight into its nature is gained. Now the universal law of development is progress from the unlimited to the limited, from the homogeneous to the heterogeneous, from simplicity, with its manifold adaptations, to complexity, with its defined parts and restricted powers. Illustrations of this law are all around us It is written on all inorganic nature: it unfolds itself yet more clearly in the plants and animals. Man, too, is no exception to it, but physically, mentally, and morally progresses under the conditions which it imposes. Clearly the law of human development should be the law of education; and the great originality of Froebel as a thinker consists in his recognition and application of this vital truth. It was this underlying thought which determined in his mind the sequence of the six gifts just described; and any person who will carefully study them will find that there is in them a gradual advance in definiteness and complexity, and that each successive gift limits the freedom of the child, while vastly increasing his power within the boundaries defined.

Education, however, must move not only from the simple to the complex, but from the concrete to the abstract. Hence in Froebel's seventh gift we pass from the solid to the surface, and give to the child first squares, and then the different kinds of triangles. To preserve the connection of the gifts and to derive the surface as, logically, it must be derived from the solid, the square is represented as the embodied side of the cube. The right-angled isosceles triangle is then derived from the square by the diagonal line, and with this triangle as the standard of comparison, the other triangles are also illustrated and defined.

The interlacing slats of the eighth gift form the transition from the surface to the line. These slats rudely represent the line, while by breadth they are still connected with the surface. They are succeeded by the wires and sticks that visibly embody the line, and through which the child learns to conceive the line as the boundary of a surface, just as he previously conceived the surface as the boundary of a solid. The limit of analysis is reached when we move from the line to the point, and in Germany there has recently been introduced into some of the Kindergartens the occupation of sorting, arranging and combining into different forms small pebbles or shells, which are intended to represent the embodiment of the point. The sorting of seeds for the gardens also comes under this head, and with these crude material representations of the point is completed the series of the Kindergarten gifts.



I trust, from what has been said, that the following points with regard to these gifts have been clear:

1. That the method of procedure, by which the successive links in the series are obtained, is strictly analytical. Thus by analysis of the solid we obtain the surface, by analysis of the surface the line, by analysis of the line the point.

2. That in using these gifts the child effects no transfor-

mation of materials. He neither adds to, diminishes, or modifies what is given him, but simply classifies, combines, and arranges the elements he receives.

School Criticism.

PROF. WALTER S. SMITH.

WE often hear the sad-hearted teacher say, "I would dearly love to teach, did not the children so sorely try me. But I have labored and studied and struggled to improve their ways, only still to see them full of faults." My purpose is to say to my fellow-teachers that the "faults" are exactly what you want. Your opportunity subsists in your children's foibles and imperfections. If pupils had none of these, you could have no field of labor. You are in the school room for the purpose of dealing with frailties; and the whole of your study, professionally considered, is with the view of treating successfully such moral and intellectual deformities as possess the children.

Instead, then, of pining under the unpromising prospect of the teacher's lot, enter as bravely into the sternest phases of your duty as though, in the soldiers' columns, you were facing shot and sabre. You are thus, by your circumstances, in the highest and best sense of the word a critic. Your field is your glory. You have the best possible opportunity to see the children's errors and to study for their correction.

But criticism is more than fault-finding. The excellent critic is the skillful analyzer, who can discern the differences between faults and graces, and who can so display the same as to make others see them. There is a lesson in every affair of the school, and the master critic is he who is able to find it.

There are two methods in current use, whose benefits are small unless the two are combined. There are hobbyists on both sides, who are effective inversely as they indulge their notions. The one method is to do all the criticizing yourself, in order that it may be well done: the other is to delegate it

all to their pupils, in order to stimulate their minds as well as to sharpen their observation. These reasons are both excellent, and since they support opposite positions, each should be received with allowance for the other. By carefully observing the workings of either plan alone, serious objections will suggest themselves.

1. The work should be well done; so the teacher should be responsible for every correction.

2. The class should be intent upon the exercise; so everyone should have part in the discussion of a fault.

But when the patient teacher, unwilling to risk his cause with another, faithfully observes each error and administers its treatment, he takes upon himself too much work. Jethro said to his son in-law, Moses, "The thing that thou doest is not good. Thou wilt surely wear away, both thou and the people that is with thee; for this thing is too heavy for thee." Moses had simply been sitting on a judgment seat, from morning to evening, trying to judge the people. He had been weighing matters which could have been determined by other men. Jethro advised him to establish ordinances (by-laws), and appoint men for their administration, reserving to himself only the "great matters." There is a world of wisdom in this. It is the foundation principle of political economy.

One of the rarest attainments in the teacher's scope is the art of economizing time and force. You can not afford to lose a moment of the one or an ounce of the other. In the six hours of a school day you must attend to the several branches or be untrue to your duty. Many of these must be so subdivided that in the best possible classification you will fall short of time. So by doing all there is to do in the field of criticism, you consume this most precious boon. And the labor of attending to the minutest details of the school machinery is that of an intellectual Hercules. "Thou wilt surely wear away, both thou and this people."

But there is danger, on the other hand, in the second method. Teachers who ignore the children's faults, accepting such construction as other children will put upon them, take

on too little work. The young critic will often be sharp and impress his classmate, when he himself is wrong. Or, what is worse, he may make no impression at all. Little feuds may be nurtured in this way, classmates seeking this as the best opportunity for venting malicious feeling.

The remedy for all these tendencies is in the teacher's watch-care. He is a critic-in-chief whose decision must be final. It is his place to see that the children's criticisms do impress the erring. What is a suggestion worth, even though faultless in itself, unless understood? It should be understood and reduced to practice.

So, to sum up, both methods are good when judiciously combined; but, taken separately, they become extremes. I like to encourage criticism in the class, since it aids me in securing attention, and since the clash of minds is a powerful tonic. I would therefore recommend you to follow some method of inter-criticism. But in giving this field to the children, do not surrender your own commission. It is for you to direct it and keep it in check. Children grow fond of it, and, if unrestrained, will abuse its privileges. It is also for you to sift out the chaff, and teach pupils what to do with the grain. The use of the grain is the practical problem of life. Criticize for a purpose. Reach that purpose in every instance. Unless a fault be worth correction it should never, under any circumstances, be named.

The purpose or object of criticizing a fault is to secure its correction. Of what use is it to tell a child he reads too rapidly, unless the telling induce him to moderate his speed?

What, then, is the teacher's part, after some classmate has pointed out the pernicious fault? First, let him be sure the complaint is well founded; then let him test its effect by a second trial, and, if necessary, a third and fourth. On this second trial he should not allow other matters to be criticized, since the sole object of giving it was to correct a faulty rate. It is wise to concentrate the mental effort upon the rate until it is corrected; after that some other error may be considered. Reading is thus criticized as an intellectual product. Atten-

tion, thought, study — these are the essentials of a recitation; and the teacher who can secure them is the master of the situation.

[Concluded next month.]

Educational Progress in America.

EUGENE LAWRENCE.

THE idea of popular instruction was brought to the New World by our ancestors in the seventeenth century, and has here found its most appropriate home. Puritan, Hollander, Huguenot, and Scots or Scottish-Irish, they had seen that most of their sufferings and persecutions had sprung from ignorance and blind fanaticism. They had become in Europe the most intellectual and studious of its people, and amidst the bleak forests of New England and the middle colonies, planted almost at their first landing the printing-press and the school. Knowledge they thought the proper cure for social evils. It was the schoolmaster and the schoolhouse, they believed, that could alone save them from sinking into barbarism, and revive a more than Attic refinement in the dismal wilderness. Massachusetts and Connecticut early passed laws that might seem severe even to our present conception of the duties and powers of the state. Every father of a family was obliged under a considerable penalty to see that his children were taught to read and write and were instructed in the elements of morals and religion. The provision was apparently enforced, and it is possible that the people of New England in the seventeenth century were better educated than those of any European nation. In the present century Germany has outstripped Massachusetts. But the honorable race is still to be run, and it may be hoped that the next and all succeeding centuries will witness a generous strife among the nations which can do most to cultivate the popular intellect. As schoolmasters alone can legislators hope to be successful. Mental equality is the foundation of popular sovereignty, and we must conclude with the Greek philosopher that no politi-

cal institutions can be made lasting without the cement of a common education. . . . .

If the common school system has been compelled to make its way slowly against the opposition of caste and sectarianism in the North and East, and was nearly banished from the South by the long prevalence of slavery, in the new States and Territories of the West and the Pacific coast it has won an almost immediate popularity. Here among the settlers of the wilderness its value was at once perceived. The schoolhouse, the church, the newspaper, telegraph, and railway have grown up together. Nowhere has the American plan of education been found so perfectly suited to the wants of a progressive people. Nowhere were ever such vast and complete educational systems so rapidly perfected as in Ohio, Indiana, Illinois, Michigan, or in the newer States of Minnesota and Iowa. Through all this wide, populous, and productive territory, the granary of half the world, caste and sectarianism have been laid aside forever; by a spontaneous movement of the people education has been made free to all; such great sums lavished upon the teachers and their schools as naturally startle our European contemporaries; and the money of the people, which in Europe has been expended usually upon the priests and kings, has here been devoted to the cultivation of those who earned it. Ohio spends nearly ten millions of dollars annually upon its public schools: Indiana and Illinois together a sum not much less. The fair, convenient primary schoolhouse shines out upon the prairie and in the forest; the higher schoolhouses of Chicago or Cincinnati are unsurpassed in New York or Boston; the science of teaching is carefully studied in a host of teachers' institutes, and with republican liberality the West and the great Northwest care for all their children. This remarkable enthusiasm for education pervades all the nation: it has become the distinguishing principle of American progress. In the heart of the Rocky Mountains, and in the midst of the gold- and silver-bearing peaks of Arizona and Colorado, the free school is the sentinel of civilization. In Tucson or Denver the love of knowledge has survived the

prevalence of what is usually thought the stronger passion, and the cities of the miners are seldom without their public school. The most splendid of our high-school buildings is said to be that of Omaha, seated on a lofty bluff over the Missouri. California has produced a system of education so complete and valuable as may well serve as a model for all older communities. Its teachers are made examples of propriety and tenderness; its scholars are taught integrity and moral excellence; sectarianism and caste are forbidden to divide the people, and the prosperous State is already feeling in all its industrial pursuits the happy influence of the common school.

Thus the American system of education pervades and covers every section of the Union. By the spontaneous impulse of the people it has been made the foundation of our political institutions. It has grown up with little direction from the general government. It has flourished in the cities and in the wilderness; it spreads its golden links from ocean to ocean, and holds in its embrace the destinies of the republic. A few statistics will show how immense is its influence and how important its results. By the census of 1870 it appears that an army of nearly 200,000 teachers conduct the public schools of the Union; of these 109,000 are females. The number of the schools was 125,000, and has no doubt largely increased. Fifty-eight millions of dollars were raised in 1870 by taxation to educate the people — a sum nearly as great as the annual cost of a European army. These figures must now (1875) be largely increased, and it is probable that $70,000,000 yearly are raised for school purposes by taxation alone, and the number educated has risen in proportion. There are also endowments and other sources of revenue, making the whole amount spent upon the common schools $64,000,000. The number of pupils in 1870 was more than six millions. Thus the annual cost of each scholar enrolled was apparently only about ten dollars. Many of these pupils have attended only for a few months at the schools: others have been irregular and inattentive. Yet the fact that six millions of children were brought under the control of the common-school system in one year, and learned at

least some of the proprieties of life, is sufficient to show its immense influence upon the young; and it may be estimated that at least half the number were thoroughly instructed in the common branches of knowledge. . . .

These two great intellectual agents, the schools and the press, indissolubly united, have produced the physical progress of the country. They have built railways, canals, steamers, telegraphs. Our people converse with each other through the newspapers, and hold their consultations in open day. Publicity has become a part of our national life. Like the Roman patriot who desired all his acts to be seen and known by his countrymen, we throw open all our doors and windows to the public. All is activity with us, curiosity, and vigilance. It would be quite impossible, indeed, to trace in a few pages the achievements of the common schools. They have extended the duration of human life among us, checked disease, cultivated cleanliness, founded new States, planted cities, indicated the sites of future capitals. The publisher finds the purchasers of his books in their graduates, the merchant and manufacturer depend upon it for their silent energy, the churches are filled with their pupils, and the lecture-rooms gratify the curiosity excited in their midst. Millions of active intellects, the offspring of the public schools, listen to the sweet strains of Bryant, Longfellow, and Whittier, muse with Bancroft on the thrilling exploits of freedom, or wait to hail the new bard and the rising thinker, whether he come from the Sierras of Nevada or the crowded cities of the East. . . .

The extraordinary cheapness of the American school system, its effectiveness, its admirable influence upon morals and public order, its equity and liberality, have been proved in every part of the Union, and, like a prudent family, the nation educates its children in common. The chief excellence of our system is that it teaches pure republicanism. In private schools and colleges the principle of human equality, upon which our country leans for safety, is sometimes forgotten. Foreign impulses, frivolities, fashions, barbarisms, may at times corrupt our youth, and reach even the pulpit and the press.

But the public schools bravely repel the wave of European reaction, and are founded upon the immutable principles of '76. In the public schools Samuel and John Adams, Washington, Jefferson, and Franklin speak to us with the fresh ardor of the dawn of freedom, inculcate a rising humanity, and demand for their new republic a plain advance over the savage blindness of the past. So long as our public schools flourish, the country is safe. So long as American ideas are taught by accomplished and patriotic teachers to each new generation, the republic will ever live. When falls the common-school system, freedom perishes and reason dies. Possessed of this admirable instrument, we may teach with irresistible clearness the principles of 1776, and the second century of the republic may witness a rapid growth of knowledge among us unequaled among nations.

Harpers' Magazine for November.

In the School-room.

The last little foot had pattered away,
And sound into silence had faded;
The last good-night had been pressed on my brow,
The room was all darkened and shaded;
And I sat at my desk thinking over the day,
Its toils and its pleasures, its labor and play.

I said to myself — and I prayed for His aid —
That my work should be holy and pure,
Should be free from all motives unworthy His name,
From all thoughts that could stain or allure;
That my teaching might guide to Him who would hold
These children so dear at rest in His fold.

I prayed that my work might be earnest and true,
Ever seeking, with tenderest care,
To guide them aright on the life-paths below,
For a life more divine to prepare;
That never a precept of mine might be given
That should lead them away from the pathway to heaven.

So I said, as I sat thinking over the day,
And I prayed the dear Father above
To guide evermore each dear little one,
And encircle their lives with His love,
To help them whene'er with life's labor oppressed,
And at last send His angels to call them to rest.

Illinois Schoolmaster.

Primary Instruction: Object-Teaching.

JAMES CRUIKSHANK, LL. D.

WE do not choose this title, Object-Teaching, from any fancy for it in itself, nor admiration for the crude and pedantic methods that are often put forth under its sanction, but because it stands for certain principles and methods in primary instruction, which have lately occupied a large share of public attention, especially among those accounted as leaders of educational opinion. If we use the term as synonymous with "the method of nature" in education, then it may prove worth the while to consider briefly: 1, What it is not, or rather in what respect the so-called object-teaching is defective in principle or method; and, 2, Some of the conditions of the true method of nature, that may improve our system of primary instruction.

As long ago as 1826, the little manual of Elizabeth Mayo, entitled "Lessons on Objects," was published in England. Near the same time, or not long after, American educators gave a large share of attention to the subject, and though there was little done, formally, in this country to organize the idea, yet its spirit was soon felt in improved methods, in a more rational apprehension of the end and the means of primary school training. It was, perhaps. rather a normal and healthful growth into the practical application of the objective in education, through the senses and the child's own endeavors, than any pretentious heralding of a new idea.

In England, Mayo's Lessons passed almost unchanged through a series of editions for nearly thirty years, until their revision in 1855, and were not largely entertained, except in a few of the schools for normal instruction, chiefly the Home and Colonial Training School. But in New York, and in nearly all our Northern States, the experiment inaugurated at Oswego, under the lead of Dr. Sheldon, was looked upon with favor, as containing the hope that the rank and file of the profession might have brought to their notice in organized form, and

through a system of normal training and practice, what the more skillful had, by intuition or a keener insight, already accepted and practiced.

There can be little doubt that the Oswego Normal and Training School has given a grand impulse towards improved methods in primary instruction, and that even those who do not accept the methods practiced or the exposition of them in Mr. Sheldon's edition of Miss Mayo's book, have yet had their attention, through these means, called to the consideration of fundamental principles, and have sought for improved methods.

The tendency on the part of the disciples of this school has been, undoubtedly, too largely to a somewhat slavish following of the standards; yet there are notable exceptions, and the managers of that school and of others that have adopted its general ideas have, during the last decade, very generally modified the methods at first introduced by Miss Jones, of London (who was employed in the incipiency of the enterprise), as well as those set forth in the "Manual of Object-Lessons."

We do not find fault with the general principles enunciated so much as with the English adaptation of them. As the crude features of these last are sloughed off, the system improves, and much may yet be hoped from the careful study and practice of the many schools for normal instruction that are contributory towards an improved system of didactics.

The foundations of the objective method of instruction were laid in the Baconian philosophy in the seventeenth century, and the utterances of nearly three hundred years ago sound much like the latest deliverances of our annual conventions of progressive educators.

"Men read in books," says Bacon, "what authors say concerning stones, plants, and animals, and the like, but to inspect these stones, plants, and animals with their own eyes is far enough from their thoughts; whereas we should fix the eyes of our mind upon things themselves, and thereby form a true conception of them."

Unquestionably the great founder of the inductive philosophy gave inspiration to the labors of Comenius, in the early

part of the seventeenth century, who thus writes: "Since the beginning of knowledge must be with the senses, the beginning of teaching should be made by dealing with actual things. The object must be a real, useful thing, capable of making an impression upon the senses. It must be brought into communication with them: if visible, with the eyes; if audible, with the ears; if tangible, with the touch; if odorous, with the nose; if sapid, with the taste. First, the presentation of the thing itself and the real intention of it; then the oral explanation for the further elucidation of it." In the same strain wrote John Locke, in 1690: "When he can talk, it is time he should begin to learn to read. But as to this, give me leave here to inculcate again what is very apt to be forgotten, viz., that a great care is to be taken that it be never made as a business to him, nor he look on it as a task. We have an aversion for many things for no other reason but because they are enjoined us. I have always had a fancy that learning might be made a play and recreation to children, and that they might be brought to desire to be taught, if it were proposed to them as a thing of honor, credit, delight, and recreation, or as a reward for doing something else, or if they were never chid or corrected for the neglect of it."

Pestalozzi, who commenced his labors in the latter part of the eighteenth century and died in 1827, is indebted to Comenius for the fundamental ideas and, to a great degree, for the methods which he organized in primary education. And thousands of educators since Bacon's time, though, perhaps, not formulating their methods, have wrought in the spirit of these great leaders of educational progress; and we judge that many have been so true to nature, and so in sympathy with the little ones, to whom they were both teacher and companion, that they were as unconscious of the life and warmth that flowed from them as the sun is of his shining, or the dear mother earth of the plant that she nourishes into life and beauty and fruitfulness.

Chief among the defects that have attended the modern experience of object-teaching, which we shall simply refer to, without enlarging upon them, may be mentioned:

1. That too frequently it has been put forward pretentiously by those who, either from want of skill or with too narrow an apprehension of its true significance, have caught the form and missed the spirit — so that the dry bones of a dead formalism have taken the place of that living inspiration that should meet response in the active, aggressive, and inquiring mind of childhood.

2. Many, also, it is to be feared, who have little genius for the work of instruction, never translate into their own experience and vitalize the ideas — elementary and suggestive at best — which they have received from the manuals or the training-schools.

3. The average American child, by methods of his own, in the daily experience of the home and the street, gains a knowledge of things that, in most respects, put him in advance of the school lessons, often manufactured as if the teacher or the book-maker supposed his mind to be still a blank; and so in this and other respects "Pestalozzian methods" have violated Pestalozzian principles.

4. Particularly, whilst it is accepted that "observation is the absolute basis of all knowledge; that the first object in education must be to lead the child to observe with accuracy; the second, to express with correctness the results of his observations" — yet too frequently (and the manuals encourage this) what he is to observe is predetermined by the teacher from her own consciousness, and not from the child's standpoint; and, in order that he may express with accuracy, he is entrapped into the repetition of scientific or difficult terms and seduced into the giving of a definition that, for any vital relation to the thing it stands for, might as well have been memorized at the first. We do not say that any intelligent teacher, who knows anything of the ways of children or has any sympathy with them, will long continue this; but this is the tendency, and a word of caution is needed.

5. The spirit of the maxim, "first form the mind and then furnish it," has been perverted and so interpreted as to give currency to a false philosophy, and to most erroneous and un-

fruitful practices. The mind is "formed" by the process of furnishing it; and it behooves all who have been led astray by this aphorism to consider that the real defect in our education is the meagerness of our knowledge of facts, more than of power to express what we know or to use what we have acquired.

There is a golden mean, and the "improved methods" are in danger, while contemning the errors of the "memoriter system," of going themselves to the other extreme.

"Gradgrind" may be amenable to censure, but he has received unmerited abuse.

The true use of Pestalozzian principles is to correct, not to overturn and destroy. It may be found that the evils which have been charged against the several schools of pedagogy arise from error in practice and false interpretation of principles, and that after all there are not so wide differences in the fundamental ideas as some have claimed.

Brooklyn Journal of Education.

Studies for Vacation. --- III.

PLANT-CLASSIFICATION: THE CORN AND SEVERAL OF ITS RELATIVES.

KATE BREARLEY FORD.

IF we take usefulness into consideration chiefly, the next grain in order should be wheat. This is known in science by the name of Triticum Vulgare, a name derived from the Latin word *tritus*, meaning beaten, and referring back, probably, to the process by which the grains were separated from the straw.

The flowers or blooms of all the grass family are so peculiar, so unlike the bright roses, tulips, etc., of our gardens, that we hardly ever find ourselves thinking or speaking of them as flowers; but these clusters or compounded spikes (heads of grain by and by) are really beautiful and graceful enough to receive a few enthusiastic adjectives, even if they are dressed in uniform green.

We should be glad to record here that wheat is a native of our own land; but in truth we must trace its origin to Western Asia. It is a fact that a kind of grain peculiar to that region and other lands bordering the Mediterranean Sea has been transformed by cultivation into wheat; and recent experiment confirms this statement beyond a doubt.

It was used so very long ago, in ancient Egypt and Palestine, and perhaps many other countries, that history has never written, in unmistakable words, where, when, or by whom the first plant was made to grow. At present all the temperate parts of Eastern Asia and Africa, South America and Australia, cultivate, use, and export this grain to a greater or less extent.

No kind of grain counts more varieties, and new ones are constantly coming into notice. Awnless or bearded, beardless, red, white, etc. — the names seem endless. We refer you to the farmer, if you would know the best varieties for ordinary soil or the most productive kinds. The parasitic fungi — mildew, smut, and rust — they will also describe and help you to distinguish as only those can who have the benefit (?) of intimate acquaintance; and one thing more — we learn that wheat *only by cultivation* has become a biennial. Following its natural bent, it grows, matures, and dies within the few warm months, just as other annuals do; and spring wheat is not unfrequently raised, though it is always considered an inferior production.

But we are talking so long about wheat that other members of this useful family may fail to receive their due share of attention. The oat (Avena Sativa) traces back its ancestors to Central Asia, and boasts of noble blood. In this practical age we think more of excellencies to-day than of virtues so long buried by centuries of time that they are either of doubtful existence or only found in a fossil form; and therefore we shall say much about the good qualities now recognized. The domestic animals live largely upon this grain, and occasionally it is down on the bill of fare for some of the best tables in the land. Formerly it was widely used for bread, when only the

more wealthy could afford bread made from wheaten flour.

A sister plant of the last-named is the Avena Fatua, or wild oat — a kind of plant-robber or vegetable Bedouin that maintains its own life by choking out crops of better grain. The expression, "sowing wild oats," has a new meaning when we know by actual experience the serious results coming from the careless spreading of but a few of these diminutive seeds.

The parentage of rye is doubtful. Recently it has been found growing wild around the Caspian Sea. We all know how similar its character and how closely it is allied to wheat. In some countries rye bread, rather than wheaten bread, is the "staff of life," since their people live wholly on this grain during a large part of the year. The straw, too, serves numberless purposes, even to the roofing of houses. Rye, as well as corn, helps in the making of whisky, and to such an extent that the liquor is often called "old rye." Barley is likewise used for this purpose, but more frequently for malt, from which come beer, ale, and porter.

Barley originated, doubtless, in North or Central Asia. It flowers like wheat, oats, rye, etc., in spikes, but prefers cooler climate. As food, we find it used in its simple form occasionally. Pearl barley is the grain separated from the husk and reduced to the size of a small shot. It is becoming an important article of commerce.

The bristly fox-tail grass (Setaria Italica), better known as millet, is said to have its name from mille, a thousand, because of its great fertility. One grain is said to produce a thousand in one year. It was primarily from the East Indies, but came to us from Europe.

Grasses proper, the useful and ornamental, may be mentioned last. The varieties seem innumerable; and the student finds he must work if he learns the forms and habits of only a limited number of these varieties. The common hay-grasses, at least, should be known, and every schoolboy and schoolgirl ought to be able to distinguish as well as to name timothy, red-top, blue-grass, etc. Timothy is a namesake of Timothy Hanson, who carried it from America to England in

the year 1780. The Latin name is Phleum Pretense. It is a kind of herds-grass, and is prized very highly for cattle and horses.

New ornamental grasses are all the time coming into notice, and some are really beautiful and curious, such as quaking-grass and feather-grass. The canary-seed in common use comes from a similar plant, called canary-grass. It is brought from Europe, and is raised very little, if at all, on this continent. A sister of this grass, however, is found in America, and the ribbon-grass of our gardens is a state of the last-named species, with variegated leaves.

Travelers say that the green turf everywhere so common in the temperate zone is nowhere seen in the tropics. Instead is the deep jungle of rank, coarse grass, or the luxuriant, rich growth of other forms of vegetation. The bamboo of the torrid zone (really a member of the same order) sometimes stretches above forty feet in height, and a common diameter is six inches. The canebrakes of the South, the reeds of our own States, the ratan — so well known to teachers and pupils — are a kindred growth.

— All is but lip wisdom that wants experience. Sidney.

— Talent for talent's sake is a bauble and a show. Talent working with joy in the cause of universal truth lifts the possessor to new power as a benefactor. Emerson.

— "My son," said a stern father to his seven-year-old, "I must discipline you. Your teacher says you are the worst boy in the school." "Well, papa," was the reply, "only yesterday she told me I was just like my father."

— Much will be gained when education, and culture, and authorship shall dare to take this high stand that Milton took; shall dare to pass by beauty in the start, and aim at higher elements and severer qualities, in the train and as the ornament of which a real beauty and an absolute grace shall follow of themselves. Dr. Shedd.

Hints for the School-room.

— We doubt whether teachers appreciate the high utility of many of the newly devised card-games in the schoolroom. There attach to them none of the objectionable features of the common playing cards, and there can be no moral danger in their use. They may now be had to illustrate and teach various branches of natural history, Biblical history, English and other literature, arithmetic, spelling, and other branches. As the season draws on when children are more confined to the house, their profitable entertainment should be provided for.

THE ABUSE OF BLACKBOARDS.

The more familiarity with chalk the better. Green is to be preferred to black for the schoolroom. There should be no seats for pupils under the boards, on account of the dust. The space assigned to each pupil on the board should be proportioned to his kind of work. Little girls behave better than boys at the board, especially in their ways of standing; so look to the latter when there. The pupil should stand generally at the right of the board.

One abuse is the amount of noise made in handling the chalk, which should be obviated at once. The work may be almost noiseless, especially with the better class of crayons. Regulate the strength to be put upon the chalk. Get uniformity of clear, bold figures of medium size, written with a steady and distinct impression.

The method of erasure is another abuse. Sometimes only partial erasure is made, and often a great dust is made by violent and rapid rubbing. No dust flies when the rubber stops at the end of a single rub; but it falls quietly into the trough.

Another abuse results from the carelessness of the pupil in beginning his work in the wrong place, at random upon the board. This should be carefully regulated. In general, he ought to begin at the left upper corner.

Notes of an Institute Lecture by Prof. J. C. Ridpath.

DISCOVERY LESSONS IN GEOGRAPHY.

Two things are too often forgotten in teaching geography — that more than any other school study, it favors the culture of observation and allows original discovery. In no study can the teacher appeal so directly to the pupil's passion for idealizing his play or work, and so set him at work to find out things for himself. In the study of the maps, a simple use of this fact would revolutionize the whole work of the pupil as to both its manner and spirit. The stiff, formal following of the set questions, and the dull, mechanical learning of the facts, would give place to an original investigation of the map and to a keen and living interest in its symbolized truth.

But to secure this, the maps must be placed before the pupil as his field of discovery. Over it he is to range with sharp inquisition, as did the original traveler or navigator, whose discoveries supplied the data from which the map is made. These topical *discovery lessons* must be assigned, the pupil being required, not to study the questions given in the book, but, under the topic, to find out those facts out of which the questions are made.

For example, let the map be that of North America; the topic all its seas, gulfs, and bays; and the starting-point the extreme northeastern extremity of Greenland. The pupil's work will now be, first to find out in what directions he must travel, to complete the whole circuit of the coast, coming back to his starting point; secondly, what countries he will skirt or pass; thirdly, what seas, gulfs, and bays he must pass or traverse, taking them in consecutive order; fourthly, their apparent comparative magnitude; fifthly, to what countries they belong or to which they are adjacent; sixthly, between what land-points they open into the ocean, or by what divisions of water they connect with the ocean; and lastly, as nearly as he can judge from adjacent countries or cities, their comparative importance to trade and travel. Carefully and thoroughly studied thus, here will be found material for several lessons, and opportunity for a wide range of *related* knowledge; the pupil is thrown upon his own resources, and he is allowed to

idealize his work, or, as the child always likes to do, to "make believe" he is a discoverer.

Without carrying the suggestion into details, it will be seen at once that by changing the map and the topic, everything that should be learned may be brought into view in these discovery lessons. It will be found, too, that a class will soon catch the idea, so that the difficulties which might be anticipated will speedily vanish. And to other advantages there will be added this, that this method will go far to free the teacher from that bondage to the text-book questions which is so generally characteristic of geography-teaching in our schools.

Prof. F. S. Jewell, in the School Bulletin.

ARITHMETIC: FUNDAMENTAL PRINCIPLES AND RULES.

Reading numbers is taught in four steps: 1. What numbers and figures are. 2. How numbers are grouped. 3. To read numbers represented by two or three figures each. 4. To read numbers represented by more than three figures each.

Writing numbers is taught in three steps: 1. To write any number less than 10. 2. To write any number less than 1000. 3. To write any number whatever.

Addition is taught in six steps: 1. To add a number not exceeding 9 to a greater or equal number not exceeding 9. 2. To add a number not exceeding 9 to another less than itself. 3. To memorize the addition table. 4. To add a number represented by one figure to one represented by two figures. 5. To add a column of figures. 6. To add numbers represented by several figures each.

Subtraction is taught in three steps: 1. To ascertain the remainder when any number represented by one figure is taken from one not less than itself, but less than itself plus 10. 2. When minuend and subtrahend are each represented by several figures, and no figure in the subtrahend exceeds the figure in the same order in the minuend. 3. When there are figures in the subtrahend which exceed those of the like orders in the minuend.

Multiplication is taught in six steps: 1. To ascertain the

product when any number not greater than 12 is multiplied by any number not greater than itself. 2. To ascertain the product when any number not greater than 12 is multiplied by any number greater than itself, but not less than 12. 3. Three principles on which the general problem is based. 4. When multiplicand has several figures, and multiplier but one. 5. When the factors are represented by several figures each. 6. When there are 0's at the right of both factors.

Division is taught in seven steps: 1. Definitions and how to make the division table. 2. Two fundamental principles. 3. Short division. 4. To find how many times a large divisor is contained in a number less than 10 times itself. 5. Long division. 6. To divide by 10, 100, 1000, etc. 7. To divide by a composite number.

Olney's Primary Arithmetic and Teachers' Manual.

— The surest way to secure order in school is to teach the children that they should abstain from whispering and making noise, passing notes, etc., not because these things are wrong in themselves always, but because they hinder the work of the school, attract attention, take up time, and prevent study — in other words, to teach the child to detect something in the act beyond the thing itself, to see its end.

Never refer to natural and peculiar weaknesses of pupils in presence of the school. It can only excite contempt for the teacher who does it. If a pupil is frequently told that he does n't know anything, he will either settle down to a belief in it, thinking it is of no use to try to be anything but a dunce, or he will be excited to a degree of anger equally disastrous to mental or moral advancement.

— If you can not answer a question pointedly and clearly when asked, say so; think of it until you can; then, after the lesson is recited, give the information desired. Some teachers are afraid to say frankly that they do not know a thing, and pupils soon find out their weakness.

— In education the method, the method is everything.

Current Topics.

— We take pleasure in bringing prominently again to the notice of our readers one of the live topics of the time, in the first of a series of illustrated articles on the Kindergarten. In this German institution, naturalized here, may be recognized the best features of the present and future, as regards primary education. Gradually, but surely, it is making its way in this country; and we hear with especial gratification of the establishment of new kindergartens and training-schools for kindergartners at many points throughout the land. Insensibly, too, the underlying ideas of the child-garden are pervading the primary schoolroom, and making the life of the wee ones there more joyful and more truly educational. Teachers in such departments, as well as those in kindergarten work or preparing for it, may study the papers we publish with manifest advantage.

— In his Report to the Connecticut Board of Education for 1875, Secretary Northrop has defined pretty clearly the connection between the schools and general improvement in villages: "Public interest, once enlisted in the adornment of streets, planting trees, grading and fencing the common, and kindred plans, is sure to embrace the schoolhouse. On the other hand, there is no fitter symbol of decline than a bleak, broken, weather-worn, comfortless schoolhouse, for it seems to invest all its surroundings with an atmosphere of discouragement and decay. When public spirit is once aroused in a community, the school usually becomes one of the first subjects of improvement." He thinks a beautiful village in itself an educator, since all the child's surroundings affect his character. Much has been done in Connecticut to beautify the rural towns, to which Dr. Northrop, strictly within the sphere of his official duty, has rendered important aid; and he sees distinct indications of similar movements in other States. We doubt whether the teacher has a nearer public duty, apart from his routine work in the common and Sabbath schools, than to aid in founding and fostering associations for village improvement (particularly for tree-planting), with occasional meetings for consultation and work, and perhaps an annual festival to popularize the reform and raise the small means necessary for its expenditures.

— A happy Boston notion, three years ago, took the shape of the "Society to Encourage Studies at Home," which has had a highly suc-

cessful career. Its plan is simple, and may be copied by studious folk anywhere. Members must be at least seventeen years old, and pledged to faithful study. They pay $2 per year, which goes for printing and postage. Ten leading members are managers and instructors — every-one, it is presumable, with his own specialty of scholarship — whose services are gratuitous. The Secretary sends each new member a programme of studies recommended by the managers, and, upon making and reporting a selection therefrom, is instructed as to the course and books necessary, and directed to one of the managers for future aid. He (or she) guides the home-student personally or by correspondence, and receives reports of progress. Only one meeting a year is held, when officers are elected, general business is transacted, and certificates or diplomas are awarded. We do not see why this scheme is not entirely practicable in nearly every county and large town reached by the TEACHER. Outside of the schools and active professions there is, we fear, but little faithful study; and societies like this would be an effective force for culture and refinement wherever founded. The *Christian Union* makes a good point here: "With the realization that, no matter how small the daily opportunity may be, study may continue as long as life lasts, many men and women will be impelled to make complete and harmonious the fragments of information which they now retain in forms utterly unavailable. They will also, when this is done, have such encouragement to farther study as they were never inspired with while at school."

— An organization yet more important than this, in its relations to popular education, has been effected recently in New York, under the name of the "American Common School League." There is need enough of similar societies the country over, if its objects are correctly stated as follow:

1. The maintenance of the non-sectarian character of the common schools of the United States.
2. The defence and protection of our common schools.
3. The reading of the Bible in the public schools, without note or comment, and its retention in any school supported wholly or partly by the tax-payers of any State or by the United States.
4. Opposition to any grant of public money to any sectarian institution of any name or denomination whatsoever, whether said money be derived from the customs, taxes, fines, or licenses, from either municipal, state, or national sources.

— A correspondent of the New York *Observer* makes a strong plea in favor of a Home for Aged and Disabled Teachers, who have worn

themselves out in the public service, and been unable to provide adequately for their old age. The general impossibility of doing this, in our profession, is one of the chief reasons for its early abandonment by most teachers; and we have no doubt that decent provision for the superannuated of all the philanthropic vocations will be a feature of "the good time coming." The New York writer suggests: "As a means of drawing attention to this great need, let the subject be agitated by the teachers and others interested in their welfare. Let some feasible plan be proposed by which such a Home may be set on foot at the earliest possible date. God grant some one may be moved to give the ground, another to offer the first $1,000 to commence operations. Let some one else offer $1,000 to rent and fit up a small temporary Home, till the permanent one can be ready. In one month's time the plan may be in actual operation, and at least a few worthy persons made comfortable and sheltered."

Literary Matters.

— One of the most unique and valuable aids to study that we have seen comes to us in the shape of *A Chart of General Literature*, by Prof. Trimble, of Swarthmore College. It follows the plan of most "maps of time," presenting to the eye, in proper relations of date, class, and comparative importance, the names of leading authors in all nations and ages. English literature is represented with especial fullness, and the other literatures — even Hindoo and Arabian — sufficiently for common purposes. The matter fills a good-sized folio, handsomely printed and bound. It is also arranged and finely mounted as a wall-map. $3.50 and $15.00. J. M. Stoddart & Co., Philadelphia.

— Our notice of Prof. Ten Brook's *American State Universities* has been delayed. The copy sent for us was misappropriated, by the shabby and dishonest trick of a bookseller; and another has but just been received. It proves to be a book of exceeding interest, and a contribution of permanent value to the history of higher education in this country. The title is a misnomer, however, ten of the fifteen chapters relating to the University of Michigan. Regarding this, however, as the representative American university, the story of its founding and remarkable success has national value. To the graduates of the University the volume is indispensable. $3.50. Robert Clarke & Co., Cincinnati.

— Miss Thalheimer again makes favorable appearance in the field of historical authorship with a new *History of England*. It is written

with her wonted grace and accuracy, and seems admirably fitted for use as a text-book in the schools. The illustrations are abundant and particularly fine; and there are six maps, with genealogical tables, etc. We trust the study of motherland, as well as of our own history, will not be neglected in the centennial years. $1.50. Wilson, Hinkle & Co.

— A treatise every way creditable to Northwestern pedagogy is *The Teacher's Hand-book*, by Prof. Phelps, of the Normal School at Winona, Minnesota. He ably discusses general principles through several chapters, but devotes the bulk of his work — about three hundred pages — to an agency unhappily fallen into disrepute in some quarters, but still likely to live long in honor and usefulness as the Teachers' Institute. He has given this topic very clear and energetic treatment, not omitting many excellent methods of instruction. $1.50. Barnes & Co.

— The same house also presents to the fall schools Martin's *Text-book on Civil Government in the United States*. Part I. deals with the Principles of Civil Government; Part II. with Civil Government in the States before their Independence; III. with the Constitutional Government of Massachusetts; IV. with the Constitutional Government of the United States. The Massachusetts part may be dropped elsewhere, and a book like Judge Brown's *Government of Michigan* or *Government of Indiana* usefully substituted. $1.25.

— Matilda Fletcher is pretty well known in Iowa, we believe, as a platform and stump speaker; but she now appears in a new role as the author of a little book of *Practical Ethics*, for elementary teaching. It is a question-and-answer book, with constant reference to a queerish sort of chart at the beginning. With abundant explanation and illustration by a clear-headed parent or teacher, we should think the book might be useful. $1.00. Barnes & Co.

— The good old *University Algebra* of Davies, taken in here and let out there, comes out in new and handsome shape as *A Manual of Algebra*, under the name of its author, and in his own Mathematical Series. The approved methods of Bourdon are adhered to, and, with other improvements, a valuable chapter on inequalities is added. $1.60. Barnes.

— Youmans's *Class-book of Chemistry* also appears in a new edition, which is substantially a new book, having been rewritten throughout, to accord with the later system of chemical doctrine, now generally accepted by the scientists. The presentation of spectrum analysis is much amplified. It is a beautiful and worthy book. Appleton & Co.

— Prof. Edw. S. Morse makes his debut in primary-school authorship with a *First Book of Zoology*, illustrated with his own graphic drawings. Its grand excellence, however, is that it sends the pupil, at once and all through, to the *thing* for study. Same publishers.

— Another promising author appears in *An Elementary Manual of Latin Prose Composition*, by Prof. S. R. Winchell. In size, practical handling of details, and the rest, it presents a pleasing contrast to the "Balbus" of our college days. J. H. Butler & Co., Phila.

— The *Select Poems of Oliver Goldsmith* have been edited for use in the schools, with literary and philological notes, by Wm. J. Rolfe, well known as a judicious editor of Shakespeare for schools, and printed in a small but elegant illustrated volume by Harper & Bros. 90 cents. Sold by Jansen, McClurg & Co., Chicago.

— The last-named house is getting together a good book-list of its own publication, among which we are pleased to note a needed and useful book in *The Primer of Political Economy*, in sixteen definitions and forty propositions, by Alfred B. Mason and John J. Lalor. 75 cents.

— *The Principles of Metal Mining*, by J. H. Collins, is replete with results of the latest researches and invention, boiled down to the compass of a manual that can almost be carried in the vest-pocket. 75 cts. G. P. Putnam's Sons; Jansen, McClurg & Co.

— *How to Use the Microscope*, by John Phin, editor of *The Technologist*, is another recent and invaluable hand-book for the specialist. 75 cents. Industrial Publication Co., New York.

— From an obscure memorandum in the book, we infer that the veteran Geo. F. Root is compiler of the *National School Singer*, a neat little music-book just issued by Barnes & Co. If so, nothing need be added to commend it. 35 cents.

— Rev. E. J. Fish, D. D., of Adrian, places us under obligation for a copy of his *Ecclesiology*, a fresh inquiry as to the fundamental idea and constitution of the New Testament Church, which seems adapted to theological study by ministers or laymen ($2.00; Authors' Publication Co., New York); also for the *Proceedings of the Society of Associated Alumni*, University of Rochester, containing his scholarly oration on the Universal in a True Education.

— *Doing and Dreaming* names an interesting story, with a capital moral, by Edward Garrett. Many teachers need just such a book. $1.25. Dodd & Mead, New York; Jansen, McClurg & Co.

— *The French at Home* is a dainty little book, the work of the clever magazinist, Albert Rhodes. It gives a sketchy, racy account of the social and private life of the mercurial Gaul. $1.25. Same houses.

— Schedler's *Illustrated Manual for the Use of the Globes* includes a good discussion of the "international date-line," etc. 25c. E. Steiger.

MINOR NOTICES.

Prof. Olney, of Michigan University, compliments Prof. Payne's

forthcoming *Chapters on School Supervision* through nearly a column and a half of the *Herald and Torchlight*, closing as follows: "Written by one of our wisest and best Superintendents, whose practical experience, guided by a thorough study of the philosophy of education in general and of the genius and working of our own educational system in particular, the book should have a careful reading by all school officers and others who have to do with our public-school system. I prophecy that it is to become a *vade mecum* among educators, and that in the future 'Payne on Supervision' will be as honorable a reference among teachers as 'Story on the Constitution' has long been among lawyers." The book is to appear early this month, from the press of Wilson, Hinkle & Co.....Ridpath's *History of the United States* has already passed to a new edition. It has been received with great favor wherever it has been brought to the notice of teachers.....Miss Haworth has added to her popular system of penmanship a set of *Blackboard Strips*, containing the capital letters in white, six inches high, and intended for the top of the blackboard. They will be ready in a short time.....Prof. Bellows, of the Michigan State Normal School, has out a revised edition of his pamphlet on *Geometrical Figures*.....The late *Report of the Minister of Public Instruction for the Province of Quebec* is a ponderous "blue-book" of 824 pages, almost wholly filled with statistical matter. We acknowledge indebtedness for a copy.....A book quite out of the common run seems to be *The Might and Mirth of Literature*, by Prof. Macbeth, published by Harper & Bros. It is a treatise on figurative language, illustrated from six hundred English and American writers..... The same firm has in press *The Student's Merivale*, being a general history of Rome, condensed from Merivale's great work into a single $2.00 volume.....Other new books: *A Text-Book of Poetry*, by Rev. Henry N. Hudson, the distinguished Shakespearian (Ginn Bros.); Townsend's *Shorter Course in Civil Government* (Ivison); *Introductory Chemical Practice*, by Profs. Caldwell and Breneman, of Cornell University; *A Manual of the Contractions in Arithmetic*, by J. F. Lanning, New London, O.; and *The Common School Question-Book*, containing 3,000 questions on the ordinary branches, by A. H. Craig, of Caldwell's Prairie, Wis.....Putnam's Sons have published a new edition of the venerable *Classical Dictionary* of Lempriere, and announce a revision of Dr. Hill's remarkable treatise on *The True Order of Studies*, also seven new books in their series of *Popular Manuals*, Prof. Mayer's *Elements of Metallurgy*, and other works of educational value.....Prof. Asa Gray, the great botanist, has a *Flora of California* passing through the press for early publication.....Darwin's new volume on *Climbing Plants* is in the press of Appleton & Co.....Prof. Gilman, author of two successful manuals,

First Steps in English Literature and *First Steps in General History*, is at work upon other volumes of similar character.....Prof. J. W. Westlake, of the Millersville (Pa.) Normal School, has in preparation an enlarged edition of his treatise on *Letter-writing and Punctuation*.....E. Jones, of Liverpool, Eng., a zealous worker for reformed orthography, is laboring to secure a congress of his co-laborers at the coming Centennial.....We are again in receipt of *The Sunday-school Times*, now edited with much ability by H. Clay Trumbull, and published in handsome quarto form, weekly, by John Wanamaker, Philadelphia. This is a publication of thorough-going excellence in all departments. $1.50 per annum.....The *Eclectic* for November has for a frontispiece a superb portrait of Holman Hunt, the famous English painter. The contents include a number of masterly articles by Dr. Carpenter, Prof. Proctor, and other foreign writers, and one, "An American's Impressions of England," by Horace White, late of the Chicago *Tribune*. $5 a year. E. R. Pelton, 25 Bond st., New York.....More school journals: *The Educational Voice*, Pittsburg, monthly for ten months a year, at $1; *The Catholic School Record*, Milwaukee, monthly, $1; and *The Common School Teacher*, Bedford, Ind., monthly, $1.

Educational Intelligence.

INDIANA.

QUESTIONS FOR THE EXAMINATION OF TEACHERS. — OCTOBER.

Physiology.—What are the uses of the bones? What is their condition at different periods of life?

What are the uses of the muscles?

What is meant by a *law* of hygiene?

What are the uses of sleep?

If the expansion of the chest be restrained in any way, what influence is exerted upon the air-cells and the blood-vessels?

Geography.—What are the divisions of the subject Geography? Define each.

Define a mountain range and a mountain system.

Locate the great and the small circles of the earth that have specific names.

What is the inclination of the plane of the earth's axis to the plane of the earth's orbit?

Name the seasons which occur in each of the five zones, and name the months in which they occur, respectively.

How does the climate of the United States compare with that of Europe in the same latitudes? If there is any difference, what is it, and upon what does it depend?

What mountains are in New Hampshire, and what is the highest peak?

Give the boundaries of Michigan and of Wisconsin.

Name two principal cities on the river Rhine.

Give a general description of each of the four great divisions of Great Britain.

History.—Upon what ground did European nations claim an uninhabited country on its discovery by them?

What was the origin and what the result of the "French and Indian War"?

Give a brief account of the public services of Benj. Franklin.

What important events occurred in the year 1776?

Why will next year be celebrated as the anniversary of American Independence?

Theory and Practice.—What importance do you attach to a teacher's understanding thoroughly what he is called upon to teach?

What are some of the characteristics of one who instructs well?

What opportunities are afforded by the ordinary work of the teacher for proper instruction in morals?

Do you think it well to devote a portion of time each day to the manners and habits of your pupils? If so, when and how would you do it?

Arithmetic.—From which hand do you write numbers? From which do you numerate? From which do you read numbers?

Upon what principle does cancellation depend?

Which is the heavier, a troy pound or an avoirdupois pound? And what is the difference in grains?

When snow is uniformly eight inches deep, how many cubic feet are there on one half-acre of land?

Define an improper fraction. Define a complex fraction. Give examples of each.

If $\frac{3}{4}$ be added to 4-5, and the sum multiplied by $\frac{7}{8}$, and the product divided by $\frac{3}{4}$, what is the quotient?

If 1 7-9 yards of cloth cost $5 6-7, what will 8 5-6 yards cost? Analyze.

Define legal interest. Define usury.

John Doe borrowed $250 of Richard Roe, payable in 8 months, at 7½ per cent per annum. Write a promissory note, dating it Sept. 1st, 1875, sign John Doe's name, and find the amount due at maturity.

What is the difference between the bank discount and the simple interest on $750 for 6 months, at 8 per cent per annum?

Grammar.—What is the analysis in grammar? What is its use?

Tell the subject and the predicate of the following sentences: Tell me what is truth. To do a great right, do a little wrong.

Tell the possessive case, both singular and plural, of lady, boy, fox, thou, who.

Correct the following sentences: Do you use Webster or Worcester's Dictionary? No pains nor costs were spared to make it grand.

Name the principal parts of the following verbs: Sit, set, raise, rise, shoe. Name a part of each of the above verbs that is not a principal part.

Rewrite the following sentence so that the verb shall be in the passive voice: I saw him.

Parse *what* in the following sentences: Take what suits you. What do you see? What man but enters, dies.

Write a sentence containing a verb in the past subjunctive; another containing the same verb in the past perfect indicative; and another with the same verb in the imperative mode.

Analyze the following sentence:

"*Beneath* the rule of men entirely great,
The pen is mightier than the *sword*."

Parse the words italicized in the preceding sentence.

OFFICIAL.—Some statistics in relation to the school fund are published, from advance sheets of Supt. Smart's forthcoming annual report. The fund last year was $8,711,000, to which $87,000 have been added, making the total amount now available $8,798,000. Of the increase, $49,500 have been added to the common-school fund by fines and forfeitures, $34,600 from the proceeds of sales of Congressional and township lands, and $2,800 from increase in values. The amount of Congressional land still unsold is 11,507 acres, valued at $105,000. All the lands of this class have been sold in 73 counties.....Supt. Smart is very actively engaged in working up an interest in the adequate representation of our educational affairs at the Centennial Exposition. Among other things, he desires that every prominent school building in the State shall be represented in Philadelphia by a photograph or a neatly executed drawing.....The State Superintendent sends a decision to Supt. Bailey, of Marshall county, to the effect that there is no statutory obstacle to the use of a schoolhouse for other than educational purposes out of school hours, provided the proper steps have been taken for its occupation.

THE HIGHER SCHOOLS.—A correspondent of the Indianapolis *Daily Journal*, writing from the State University, says: "The new President of the University, Dr. Moss, has proved himself thus far to be every whit a man. He is eloquent and scholarly, and is an admirable teacher. The weight and force of his character are such that he commands simply by his presence. The students and Faculty have given their allegiance to him most cordially. The attendance is larger than it has been for a number of years. The chemical department, under Prof. Van Nuys, is doing a grand work for the University and the State. The laboratory is thoroughly fitted up, and students are pursuing courses in both qualitative and quantitative analysis. Chemistry is taught in the laboratory, and this department now makes chemists just as medical colleges make physicians. The course is precisely the same as that pursued at the great laboratory of Fresenius in Germany."".....The Board of Directors of Purdue University has appropriated $1,000 for physical apparatus, and a like sum, respectively, for a first-class solar microscope, a reference library, and chemical apparatus. The Board will try to secure the establishment of a government signal-station at the University.....Asbury University enrolls 426 students so far this term. The publication of the *Review* has been resumed.....*The*

Alliance supplies this gratifying paragraph: "Wabash College, located at Crawfordsville, Ind., was never more prosperous than now. It has excellent and commodious buildings, full apparatus in all departments, and is supplied with twelve competent professors, some of whom have been present over forty years. Two hundred students are now in attendance."……James H. Cunningham and Nathan Powell, two wealthy citizens of Madison, have each presented Hanover College with $5,000. ……A subscription of $10,000, made some years ago to Smithson College by John T. Musselman, of Logansport, has been the occasion of much troublesome litigation. He refused payment, on the ground of unsound mind. The college sued him, and he transferred his real estate to another. A recent trial of the case resulted in a verdict against him, and a special finding that the grantee of his property was not indebted to him; so that the property will probably be reached in payment of his subscription .....The Dunkards, or German Baptists, have finally agreed to settle all the old debts of Salem College……The *Literary Ensign*, of Hartsville, notes as a remarkable fact concerning the University there, that it graduated its President and its four professors……A late number of the Oxford *Tribune* says: "Over one hundred and seventy scholars are attending the Academy this session. Prof. Barr and his assistant teachers are winning golden opinions for themselves."……A Conservatory of Music has lately been opened in Warsaw, and had 54 pupils to start with.

THE INSTITUTES, ETC.—We have taken no pains to collect reports of the many county institutes held in Northern Indiana during the last two months. Nothing can be dryer, less interesting or important, than the skeletons usually presented. The reading of one answers pretty well for all. The meetings in the several counties seem to have been large and enthusiastic as usual, and to have had no special feature distinguishing them from the institutes of former years. We have been able to attend but very few of them. Supt. Cosper's first institute, held in Lagrange, was the largest ever held in the county, and was engineered throughout with an ability and accuracy of judgment quite remarkable in one so young and inexperienced. Supt. Moury's institute assembled this year in the fine high-schoolroom at Elkhart, and was characterized by the size and excellence customary with such meetings in this county. A very bad spirit, however, together with plain defiance of the law, was exhibited by somebody (or bodies) at Goshen, in forbidding the closure of the schools for the week, and thus disappointing the teachers of their annual opportunity for professional improvement. Supt. Barns's institute, at Waterloo, numbered over 200, overflowing, with visitors, the largest hall in the town, and comprising ma-

ny teachers of superior intelligence and practical faculty. This meeting was rarely honored by the presence and labors of President Jones, of the State Normal School, who delivered several addresses of great force and tangible value. It is the only institute he has attended in Northern Indiana, and Supt. Barus was extremely fortunate in securing his services....." Visitor " sends us this report from Portland, Oct. 29th: " The Jay County Institute is a good success. One hundred and ninety enrolled. Prof. W. H. Fertich is here. Prof. E. A. Burns instructs in elocution. W. A. Bell worked one day, and lectured Tuesday evening on " Home and School." Dan'l Hough and D. B. Veazey, book agents, did good work in map-drawing. T. W. Fields, of the Kewanna Normal, instructed in physiology, etc. Other able instructors present." .....The Steuben County Institute meets at Angola Nov. 15–9, and that of Marshall county at Plymouth the same week.....Prof. W. D. Henkle, of Salem, O., editor of *The National Teacher* and of *Educational Notes and Queries*, has been engaged by Supt. Ewing for his institute at South Bend Dec. 27–31. This is enough to ensure its success.....Cass county dispenses with an institute this year, several good normal classes having supplied the demand for professional instruction Supt. Moury, of Elkhart county, publishing the fact that the examination of teachers for the winter schools shows that they have advanced their qualifications at least fifty per cent during the past year, says that " this is due in part to the township institutes, but the earnest work performed in the Normal and Classical School at Goshen, by both instructors and students, is the chief cause of the accelerated progress of the schools of the county."

THE COMMON SCHOOLS.—A handsome catalogue (or " Calendar ") represents the Laporte schools for 1874–5, of which Supt. Swift's report fills a third to excellent purpose. The action of the Board last year, securing an abler class of primary teachers, he says has fulfilled every hope, and made it possible to modify the more rigid grading of the departments, so that pupils are now promoted as fast as they are ready for higher grades. He sets forth clearly the defects of the grammar and ward schoolrooms, and recommends some changes. Of the High School he says it " is at last in a situation to compare favorably with any of the other departments. This has been accomplished by having teachers enough, by the liberality of the Board in furnishing the necessary appliances, and by good methods of instruction. . . We are now in good shape to prepare students for college, and the number disposed to take advantage of this is rapidly increasing." The teaching has improved. " The teachers have studied more and thought more upon the subjects taught." Many valuable remarks as to the instruction

in particular branches follow, which might be read to advantage by superintendents and teachers everywhere. Some good ideas of discipline are given. He would have less corporal punishment and more suspensions, with greater difficulty of reinstatement than has prevailed in Laporte; would require only so much order as is consistent with study and recitation; and would entirely abolish the practice of detaining pupils to get lessons after school. Teachers, 22; enrollment, 1104; average number belonging, 755; average daily attendance, 727; per cent of attendance, 96; cases of corporal punishment, 31.....The rules for the government of the Lagrange public schools, and their course of study, have just been published in a neat pamphlet, and are worthy of general study. Supt. Mohler's report shows that, of 391 children of school age in the district, 365 were in the schools last year—a percentage of 93, which is truly remarkable, and far above the average heretofore. The tardiness, however, is enormous, and the Superintendent laments the fact in strong terms, and suggests remedies. He recommends the introduction of language and science lessons, and we see they have a place in the new course. The order of the schools has been excellent, and so few cases of corporal punishment have occurred that it has not been worth while to report them. Not a single instance of expulsion or suspension marred the year's record. On the whole, this school seems to be in excellent hands.....The seventh Annual Report of the schools in Attica (for 1874–5) fills a pamphlet with interesting matter. The old claims have all been paid, and the schools are now free from debt. The Trustees' report contains an unlucky expression: "The financial condition of your schools are," etc. The report of Supt. Barnett (now of Elkhart) presents much interesting matter, which we have not space to epitomize. The normal department of the High School is doing good service.....The Indianapolis schools report for September a total enrollment of 8,757, with 7,984 average number belonging, and 7,400 average daily attendance; cases of tardiness, 759. The Board of Education approve the kindergarten, though they doubt the legality of applying the tuition-fund for the instruction of children under six years of age; and authorize the Superintendent to furnish any unoccupied schoolroom for such purpose, whenever the teacher can be paid by private subscription.....The annual report of Supt. Caulkins, of Tippecanoe county, includes the following statistics: Schoolhouses in the county, 1 stone, 23 brick, 108 frame, 1 log; total value, $315,630; built during the year, 3. Teacher, 104 males, at an average of $2.42 per day; 82 females, at $2.36. Average length of terms, 159 days, against 136 last year. Pupils, 8,550, an increase of 2,132. Average daily attendance, 5,183; increase, 472. Uniform text-books are in use. The district schools are graded in pri-

mary, intermediate, and grammar departments, with a course of study for each. Teachers make monthly reports at the township institutes, which are consolidated by the Secretary and sent to the Superintendent. Every effort, by circulars to teachers and by personal appeal, has been made to increase the school attendance, with remarkable results. Says Supt. C.: "In many instances I found the entire school population of the district enrolled in the school." The report shows progress all along the line in Tippecanoe..... The September statistics at Logansport show an enrollment of 1,371; av. no. belonging, 1,203; av. daily att., 1,131; cases of tardiness, 150; time lost thus, only 19 hours!.....The Michigan City School Board contemplate opening one new English and one new German department in the old building. Several rooms now occupied are very much crowded. A music-teacher is also talked of.....The October report at South Bend exhibits: Enrollment, 1460; av. no. bel., 1359; av. daily att., 1272; per cent of same, 93.54; cases of truancy, 21; of tardiness, 150; visitors, 252. First prize chromo to Miss Laura Shields's primary; second, Miss Falvey's lower intermediate; third, Miss Stewart's upper intermediate; fourth, Miss Douglass's grammar department. .....Elkhart for September: Enrollment, 1126, against 951 same month last year; av. no. bel., 1045; av. daily att., 996, against 887 as the largest for any month last year; visitors, 90. Only 51.6 per cent of children of school age in the city are enrolled.....Goshen: Enrollment, 634; bel., 552; att., 482; half-days lost by absence, 1965, of which 1161 were excused.....Wabash for the month ending Oct. 15; Enr., 605; bel., 568; att., 550; per cent of att. on bel., 97; cases of tardiness, *eight;* visitors, 21. This is a very good showing. In nine rooms there was not a case of tardiness..... Supt. Johnston is struggling with tardiness and absence at Albion. He shows that an aggregate of 36.95 school weeks has been lost in the primary and secondary departments, and 53.5 in the grammar and high schools, during a single month.....The Lincolnville (Wabash county) schools have opened in a new building, in care of Prof. McNally and Miss Whiting.....The Rensselaer schools are working smoothly under the first Superintendent they have had — Prof. J. G. Adams. C. W. Clifton, First Intermediate; Miss Mattie Benjamin, Second Intermediate; Miss Ada Strayer, Primary.....Every school in Syracuse township, Kosciusko Co., is supplied with a globe, maps, cubical blocks, and apparatus for primary teaching, and nearly every schoolhouse has a woodshed. A township graded-school has been established, with a high school in it this year for the first.....Twenty per cent increase in school attendance in Steuben county is reported for the year ending Aug. 31.....Denominational schools are making mischief with public schools in Bremen.....Marshall Co. schools open Nov. 22.

PERSONAL.—A memorial address, in eulogy of the life and character of the late President Nutt, was pronounced at the State University on the 11th ult., by Prof. Ballentine, at the request of the Faculty. It was based on the text, "For David served his generation by the will of God, and fell in sleep"; and is described as a scholarly, tender, and beautiful tribute to the memory of the dead.....Prof. Campbell, of Wabash College, who is credited with the origination of the plan of the Centennial Expositton, and has been rewarded by the appointment of Secretary to the National Centennial Commission, has removed with his family to Philadelphia, to remain there until the close of the Exposition next year.....Miss M. Haworth, the well-known author of text-books on penmanship, will superintend the writing in the Lafayette schools for a few months.....Prof. John M. Coyner, formerly an active teacher in this State and author of an analysis of the United States Constitution in chart form, is doing yeoman's service for education in Salt Lake City, as editor of the *Utah Educational Journal* and Principal of a Collegiate Institute there, in whose instruction he is assisted by his wife, his daughter Emma, and others.....County Supt. O'Brien, of Laporte, has accepted the Assistant Superintendency of the State Reform School. It was expected that Prof. Warren Hosmer, late of the schools at Fond du Lac., Wis., would succeed him.... Supt. Bailey, of Marshall Co., has opened an Educational Column in the Plymouth *Democrat*, to which he contributes an unusual amount of interesting matter.....The Albion *New Era* pays a deserved compliment: "M. C. Skinner, as the County Superintendent of Common Schools, is a success, sparing neither pains nor money to 'put it through.'".....New Principals: Prof. Berry, formerly of Winamac, and for the past year writer in a county office at Logansport, New Waverly school; M. Menefee, Boswell; J. P. Bunnell, Buena Vista; W. S. Whittinghill, Huntingburg; Frank Vanauken, Waterloo; Lloyd Caldwell, Waterford.....Our energetic and clever friend, J. C. Lilly, of Atwood, is announced as teacher of the winter school at "Buzzard's Glory," Kosciusko Co.....All the teachers in the Monroeville schools are said to be college graduates. And yet the schools are reported as "in a most prosperous condition"!.....Prof. E. M. Chaplin, late Principal at Milford and Syracuse, has, after a brief period of service for Barnes & Co., taken an agency for Wilson, Hinkle & Co.....Prof. Snook, formerly teacher at Sharpsburg, is now editor of the Tipton *Times*..... Rev. T. Vanscoy, of Rensselaer, ex-Principal at Bluffton and Oxford, was married Sept. 22, to Miss Jennie Thomas, of Battle Ground.....The Fort Wayne *Gazette* says: "In one room of our city schools there are three pains of twins, all girls, and nearly all of the same age. Each one resembles her sister so much that the teacher is puzzled to call them by their right names."